knew was an available option and would be operable. There still was no obviousness since nothing in the prior art suggested, i.e., motivated, selection of the particular counterion in interest. As shown below, this principle applies fully to the rejected claims where there is nothing in the prior art which suggests that, e.g., α_0 be maintained at values less than 30°C. Thus, despite the facts that it was well known that such values are achievable and that such values had been employed in various prior art scenarios, there is nothing in the prior art which motivates a skilled worker to employ the restriction recited in the claims: $\alpha_0 < 30°$. Thus, as far as judicial determinations go, those of relevance demonstrate the non-obviousness of this invention, as further elucidated below.

The examiner correctly focuses on the nature of the orientation layers used in the cited references. The examiner notes that Masubuchi mentions the possibility of rubbing in order to produce orientation layers. This is a true but incomplete statement since Masubuchi mentions with equal emphasis a second possible method for generating orientation layers and, thus, inherently also α_0 values. This is the slanted vapor deposition of SiO_2. These two methods are also mentioned in the Funada reference (JP 54-12762). The latter, however, mentions a third possible orientation method. These three are: rubbing with a cloth, vapor deposition of SiO_2 from the slanted direction, and also surface treatment with alkyl phenols, a method not mentioned by Masubuchi.

A key issue underlying the non-obviousness determination, thus, is whether from Masubuchi alone, Funada alone and/or the two references together, a skilled worker would be motivated to choose an orientation method which limits the values of α_0 to those less than 30°. It is believed self evident that there is nothing in either of these references which motivates a skilled worker to choose any particular α_0 values. In other words, all values appear to be equally selectable in accordance with the prior art, whereby it is simply not obvious to choose only values of α_0 less than 30° as required by all the claims in this application.

For example, in the two methods mentioned by Masubuchi, a wide variation of α_0 values is possible. As previously made of record in this and ancestor prosecution, using the slanted SiO_2 method values larger than 30° are very often generated. See the Cognard article of record, pages 32-33, for example. As for Masubuchi's other method ("rubbing method"), the following can be stated. On the one hand, this could be interpreted by a skilled worker as referring to the rubbing of a substrate surface directly by a cloth. Typically this will lead to α_0's of about 0°, i.e., no tilt if any alignment at all is achieved. On the other hand, a skilled worker could interpret this to be referring to the also conventional method of first coating the surface with a film of a polymer such as polyimide or polyphenylene. In this case, tilt angles in the range of > 0°-7° and up to 15° but occasionally even higher values can be obtained. As can be seen, overall, a skilled worker reading Masubuchi et al. would know that values of α_0 less than 30 or greater than 30 can be selected but would receive no suggestion to motivate him/her to limit the selected values of α_0 to those less than 30°. Lacking such motivation, there can be no obviousness.

The same conclusion applies directly to Funada. As noted above, this reference includes, in addition to rubbing by cloth or slanted SiO_2 deposition, surface treatment with alkyl phenols. Regarding this latter method, see Table III of Cognard. It is entitled: "Surfactant agents reported to induce homeotropic alignment of nematic LC's." (emphasis added). Note entry 3.3 of Table III on page 20 referring to "phenols." These appear to suggest α_0's of about 90° (homeotropic alignment). Thus, Funada et al. may even more clearly fail to motivate a skilled worker to arrive at the claimed subject matter in terms of its α_0 aspects. Perhaps, this is why the examiner included only Masubuchi et al. in the rejection. Nevertheless, even the Masubuchi et al. disclosure fails to provide the necessary motivation to support an obviousness rejection, as established above.

Attached is yet another Form 1449. The undersigned apologizes for adding to the voluminousness of this application. However, it is necessary to provide a few additional documents. These are:

JP 01-120528 of Alps
JP 50-007495 of ISE Electronics
JP 56-091277 of Citizen

English language translations of the first two are enclosed. The last one is an equivalent of Togashi cited in the examiner's rejections.

These three references were cited by an opposer (NEC) of the corresponding application in Japan. Also enclosed is the decision of the JPO upholding the validity of the corresponding Japanese patent despite the citation of these references.

The ISE publication would appear at least to be analogous prior art since (cumulative, it is believed) it relates to liquid crystal display devices. However, it is respectfully submitted that the Alps publication is not analogous prior art since it is neither in the field of this application (liquid crystal display devices v. high speed liquid crystal elements used in shutter arrays for printer photo writing) nor reasonably related to the problem addressed by this invention of achieving wide angle displays, i.e., visual effects (irrelevant to shutter arrays). (Claims 20-89 and 91-96 specifically relate to liquid crystal display devices. Claim 90 (a liquid crystal switching element) refers specifically to a "surface for display of an image" inherently also relating to display devices.) Thus, the Alps disclosure can not possibly provide motivation for a skilled worker to arrive at the claimed subject matter. As a result, for example, the facts that its fields desirably are crossed at angles from 20-70° and that it orients layers by rubbing polyimide resin, are not pertinent. Perhaps, this is why in the printer-related device of Alps, the preference is for angles between 20-70° (preferably from 40-45°) whereas for this invention it is preferred not to employ angles between 20-70°, but

rather those outside this range as discussed in the specification. In any event, Alps is not analogous art.

The statutory fee of $240.00 for submission of the attached references is included in the attached check.

Respectfully submitted,

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